

SEQUENCE LISTING

RECEIVED

APR 1 9 2002

TECH CENTER 1600/2900

<110> Solari, Augusto Inventi

Zanuso, Giovanna

Filippini, Silvia

Torti, Francesca

Otten, Sharee

Colombo, Anna Luisa

Hutchinson, Charles R

<120> PROCESS FOR PREPARING DOXORUBICIN

<130> 101615-00009

<140> US 09/673,254

<141> 2000-12-06

<150> PCT/US99/07016

<151> 1999-04-22

<150> US 09/065,606

<151> 1998-04-24

<160> 1

<170> PatentIn version 3.1

<210> 1

<211> 2870

<212> DNA

<213> Streptomyces peucetius

v

ai

<400> 60 ggatccgcac cgggtacacg gcacgggacc gcccaccgcg cggtgcgcgg tgggcggtcc cgtgccggtc gcggccggcg gatcagcgca gccagacggg cagttcggtg agccgcgcg 120 tctgggcccc cttccggcac caccgcaact cgtcgtacgg cacggccagt cgggcctcgg 180 ggaacctgct gcgcagtacg ccgatcatcg tgcgcgactc cagctgggcg agctgctccc 240 cgatgcagta gtgcggcccg tcgccgaagg tgagccgccg ccacgaggga cggtccgggt 300 ggaaggcgtg cggggcgtcg tgatggcggc cgtcggtgtt ggtgccctcg atgtccacca 360 420 gcaccggcgc tccgcggggc agccggacgc cgccgatggt cacctccgtg gcagcgaacc 480 cggcgtcctc gtcggcatcc gccgcgaggc ggcccgccag gacctccgcg agcaggaagc 540 ccaggaagga gccggtggtg tcgtggccgg cgaagatgag cccggtgatc atgtagacga 600 660 gctggtcgtc ggagaccgag ccgaactcgg cctgcgcgcg ctcgtacagc acgcgggtca tggtcggggt gtcgttccgc cgggctgagt gcacggcttc gaggagcagg ctctccaggg 720 780 ccgaggtgtc cggcacgccc ccggcagggt ccgtgccgtc acccccgccg ctctgcgggc 840 cgccgaggcc gagtgccttg agaacgctga cggcctcgcg ggccatcgcc ggatcggtga ccggcacacc gagcagctcg cagatgacca acagcgggaa gtggtacgcg aagccgccga 900 960 tcagctcggc cggtttgccc gaccggccgg aggcgtcggc gagttcggtg agcagccggc 1020 cggcgatcgc ggcgatgcga tccgtccgct cggccagccg gcgcgggttg aacgcaggtg cgtggatgcg gcgcaggcgc cggtgggcct cgccgtccac ggcgatgagc gtgaacggac 1080 1140 gcagctccgg aacggggatg tcgagaccgt cgtccacccc ccgccaggcg gcgggggcga 1200 ggtcggggtc cttcacgaac cggggatcgg ccagcacctc gcgggcgagg gcgtcatcgg 1260 tgatgaccca ggcgggtccg cccgcggggg cgttcacctc gacgaccggg cccgcctccc 1320 ggaaggcgtc gtgcacctcg ggcttgcgct gcatggtcat catgggacac gcgaacgggt cgacggccac ccggggcgcc tcgccgctca cgaggcaccg cccgccgccg cggggtaccc 1380 ctcccgcagt tcgaccaccg agaagccggc cccgtgcggg tcgagcaggt ccgcccgccg 1440 1500 ccccctgggc gtgtcggcgg gctcgttctc gacggagccg ccgagttcaa cggcgcgccg 1560 gaccgtcgcg tcgcagtcgt gcacggcgaa cagcacggcc cagtgcggcc gtaccgcgcc 1620 ggtgacgccc agctcctggg tgccggcgac cggtgtgtca ccgatgtgcc agaccgggtc 1680 ggtgacgccc ttcagtccgg tgtcggccgg agccaggccg agggtcgccg ggtagaagtc 1740 ccgggcggcc ccgatgccgt cggtcaccag ctcgacccag ccgaccgagc cgggcacgcc 1800 cgtcacctcc gcgccctcca tgactccctt gcgccagacc gcgaacgcgg ccccggcggg gtcggcgaag accgccatcc ggccgaggcc gaggacgtcc atcggagtca tgatgacctc 1860 gccgcccgcc gtctcgaccc gcttggtcag tgcgtcggcg tcgtcggtgg cgaagtacac 2 1920 01

ggtccagatg gccggcatgc cgtgctggtc gttcccgggc ccgtacggcc ggtggtaggg 1980 2040 ggtgtcgatc tggtggcggg cgaccgcggc gaccagcttc ccgtcggagc tgaacgtcgt gtatcccccg gcgcccgggt cgctgaccac ggtggcggtc cagccgaaca ggccggtgta 2100 2160 gaagtcggcc gaggcggcga catcgggcga accgaggtcg aaccatgcgg gggcgccggg 2220 cgcgaacctg gtcacgaatc gttcctttcg atggatcggc acacgagcgt ctgcgctcgc ggatgagacg gacatctcgc ggatgagacg gacatgcggg cggggcgggc cgccgccgtc 2280 agtgcgcggt gtcgccgacg gcggccgcgc cggcctccca gagcttcgcc gcgaggccgg 2340 2400 cgtcggcggt cgggccgctc accggggaca gccgccggtc gctgtagtag ccgcccgtgg tcaactcctc ggccggcgcg gacgccagcc acacgagggt gtcggcgccc ttcgccgcgg 2460 2520 agcgcaggaa ggggttgaac cggaagtagg acgaggcgac cgtgccccgt ccgatgcggg 2580 tgcggacctc accggggtga tagctgaccg ccagcacgtc cggccagcgc ctggcggcct 2640 ccgccgcggt catgatgttg gcctgtttgg acgtgccgta cgcctggccg gcgctgtagc 2700 ggtgacggtc gccgttgagg tcgtccgggt cgatccggcc ctgggtgtac gcgtcggacg 2760 aggtgaggat cagccgcccg cccgcgagcc gctcccgcag cagccgtgcc agcaggaagc 2820 ctgcgaggtg attgacctgg atggtggcct cgaacccgtc ctgggtcgtg gtgcgcgacc 2870 agaacatgcc gccggcgttg ctggccatga catcgatgcg cgggtaccgg